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No-Soon Kim

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KED & ASSOCIATES, LLP

P.O. Box 221200

Chantilly, VA 20153-1200

EXAMINER

CHOW, YUK

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                      |                                     |  |
|------------------------------|--------------------------------------|-------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/815,837 | <b>Applicant(s)</b><br>KIM, NO-SOON |  |
|                              | <b>Examiner</b><br>YUK CHOW          | <b>Art Unit</b><br>2629             |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10/12/2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-23 and 25-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-23 and 25-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 101***

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 21-30 are rejected under 35 U.S.C. 101 because "A computer program product" is a non-statutory subject matter. More specifically, claims contains subject matter "**computer program or code**", which does not produce a useful, concrete and tangible result.

The following is a suggestion for correction:

*A computer program product comprising a CPU-useable medium having a CPU-readable program, wherein the CPU-readable program when executed on a CPU causes the CPU to control a screen brightness value of a terminal comprising:*

*A first instruction for causing a computer executing said instruction to ...*

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**3. Claims 1-3, 5-6, 10-16, 20-23, 25-26 and 30 are rejected under 35 U.S.C. 102(e) as being anticipated by Lee et al. (US Patent 7,158,173).**

As to claim 1, Lee discloses an apparatus (Fig. 1) for controlling a screen brightness value of a terminal comprising:

a controller (see abstract, AGC Fig. 1(106)) which controls the terminal to sense an illumination intensity of a photographed object (Fig. 6) around the terminal (Fig. 4(416, 418)), the photographed object comprising a digital image having a plurality of pixels (digital image inherently having a plurality of pixels) , the controller to determine a level of the illumination intensity (see abstract) from a data table (Col. 9 table 1) based on a most frequently detected brightness value of the pixels in the digital image (Fig. 4(406, 414)); also Fig. 9(a-d) shows the histogram of luminance elements); and

a display unit (Fig 1(110)) which controls the screen brightness value of the terminal based on the level of illumination intensity determined from the data table by the controller using the most frequently detected brightness value (Fig. 9(a-d) shows the histogram of luminance elements).

As to claim 2, Lee discloses the apparatus according to claim 1, wherein the terminal includes a camera (Fig. 1(100)).

As to claim 3, Lee discloses the apparatus according to claim 2, wherein the controller controls the camera to photograph the object when a user manipulates or uses the terminal (Col. 4 lines 40-43, image signal generated by photographing of the camera, it is inherent that a user has to manipulate the camera.).

As to claim 5, Lee discloses the apparatus according to claim 1, wherein the display unit sets the screen brightness value of the terminal (Fig. 8 (step 504)) based on the most frequently detected brightness value of the pixels in the digital image (Fig. 4(406, 414), also see Col. 6 lines 4-37).

As to claim 6, Lee discloses the apparatus according to claim 1, wherein, for a predetermined time period (Fig. 4 (step 414)), the controller continuously controls the terminal to sense the illumination intensity (Fig. 4 (step 400-414)) and to determine the level of illumination intensity (Fig. 4 (step 418)), and the display unit continuously controls the screen brightness value of the terminal (Col. 6 lines 4-37).

As to claim 10, Lee discloses the apparatus according to claim 1, wherein the terminal is a mobile terminal (see abstract, also Col.3 lines 1-8).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**5. Claims 7, 17 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (US Patent 7,158,173) in view of Ogawa (US Patent 6,597,339).**

As to claim 7, Lee discloses the apparatus according to claim 6 above.

However, Lee does not teach that if the predetermined time period has expired and a user then manipulates or uses the terminal, the controller again starts controlling

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the terminal to sense the illumination intensity and to determine the level of illumination intensity, and the display unit again starts controlling the screen brightness value of the terminal.

Ogawa teaches a backlight controller utilizes a time-lapse monitor, which issues interrupt upon user input (Fig. 6 (step 604)) to acquire current state of backlight (Fig. 6 (step 606)), and control the backlight level (Fig. 6 (steps 607-610)) based in the expiration of predetermined time (Fig. 6 (step 605)).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the time lapse monitor of Ogawa's into display brightness controller of Lee's because the luminance of the backlight is decreased to save power consumption, it improves usability of a mobile device.

**6. Claims 8-9, 18-19 and 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (US Patent 7,158,173) in view of Harney (US patent 4,352,105).**

As to claim 8, Lee discloses the apparatus according to claim 1 above.

However, Lee does not teach a data table including a first range of brightness peak values and second range of brightness peak values different than the first range of brightness peak values, the data table further including a first illumination intensity value corresponding to the first range of brightness peak values and a second illumination intensity value corresponding to the second range of brightness peak values.

Harney discloses a display controller wherein quantizes intensity into difference ranges (See Col. 1 table 1, the table including several illumination intensity values ( $I'$  = 0-3) corresponding to several ranges of brightness peak values ( $I$ )).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use range / intensity mapping as in Harney into display controller of Lee, because range mapping or look-up table implementation simplifies the control, it reduces data variables such as brightness peak values into a manageable size (see Harney Col 1 lines 38-68).

As to claim 9, Lee and Harney discloses the apparatus according to claim 8, wherein the controller reads the first illumination intensity value (see Lee Col. 9 table 1) from the data table based on the most frequently detected brightness value (Fig. 9(a-d) shows the histogram of luminance elements), and the display unit controls the screen brightness value (Col. 9 table 1(Dark state, Bright state)) of the terminal based on the first illumination intensity value read from the data table.

**7. Regarding claims 11-20, limitations within these claims are identical to claims 1-3, 5-10 respectively, except they are the method claims. Therefore, same rejections apply to these claims.**

**8. Regarding claims 21-23, 25-30, limitations within these claims are identical to claims 1-3, 5-10 respectively, except they are the computer program product claims. Therefore, same rejections apply to these claims.**

### ***Response to Arguments***

9. Applicant's arguments filed 10/12/2007 have been fully considered but they are not persuasive. Applicant asserts, "Lee does not teach or suggest based on a most frequently detected brightness value of pixels" However, examiner respectfully disagrees. In particular, Lee shows histograms (Fig. 9(a-d)) of luminance elements, according to the dictionary (Merriam-Webster): *a histogram represents a statistical data whose height is corresponding frequencies.*

Histogram is commonly used to represent the statistical data such as brightness value of pixels, it will be appropriated for one of ordinary skill in the art to interpret most frequently detected brightness value of pixels as the value at the peak of bell curve in Fig. 9(a) of Lee.

Applicant also submits, "Lee does not teach or suggest a controller to determine a level of the illumination intensity from a data table based on a most frequently detected brightness value". Nonetheless, Lee teaches a (step 502 in Fig. 8) to calculate histogram of luminance elements and control the brightness value (Fig. 8(504) using a data table (Col. 9 table 1) and most frequently detected brightness value (Fig. 9(a-d)).

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to YUK CHOW whose telephone number is (571)270-1544. The examiner can normally be reached on 8-6 M-TH E.T..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amare Mengistu can be reached on 571 272-7674. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Y. C./

Examiner, Art Unit 2629

/Amare Mengistu/

Supervisory Patent Examiner, Art Unit 2629